This seems to me to be, as others have suggested, a toxic condition due to the absorption of soluble products from a tubercular focus in the neck and not the typical giant cells system. It has been compared to the tuberculides of the skin, lichen scrofulosorum, etc., and an analogy can easily be drawn to the so-called eczematotis conjunctivitis where tuberculosis is often present. These toxic inflammations and infiltrations of the eye are often contemporaneous to involvement of the cervical lymphatics and I have found that the primary cause often lies in diseased tonsils and adenoids. Undoubtedly in this case the cervical glands were kept constantly irritated by the chronic inflammation in the nose and throat and the tubercle bacilli found a favorable soil for growth.

Such an eye as I have shown may go on to phthisis bulbi or have a recurring choroiditis, where fresh patches appear as old ones atrophy.

The essential treatment is tuberculin and hygiene.

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Case of Acute Mercurial Poisoning Followed by General Necrosis of Maxillary Bones, and Purulent Otitis Media.*

By M. HERZSTEIN, M. D., and AD. B. BAER, B. L., B. S., D. D. S., M. D.

On Dec. 3rd, Mrs. E., 28 years of age, drank a solution containing six 7½-grain HgCl tablets. She vomited freely within five minutes and had her stomach washed at the end of 30 minutes and in the interim drank the whites of half a dozen eggs and two glasses of sweet oil. At the end of an hour she became unconscious and was removed to hospital. Urine voided by catheter for first time at the end of 62 hours. Unable to take nourishment except by rectum, as everything taken by mouth was immediately expelled by vomiting.

A diffuse papular rash appeared quite over the entire surface of the body at the end of 24 hours; heart dilated and sounds weak; pulse 140 to 160, weak, thready and low tension; liver enlarged about three fingers beneath free margin of the ribs; urine examination showed presence of albumin 0.3%, large quantity of pus, renal and vesicular epithelium and large number of hyalin, granular and epithelial casts. Her ankles, knees, hips and elbows became sore and stiff, and by Jan. 1st she had lost 35 pounds in weight.

By the second day her teeth had turned almost jet black in color and were extremely loose, while from the sockets there exuded a free discharge of foul smelling pus. Breath was intensely foul; the saliva fairly ran from her mouth in a stream. She could only open her mouth about ¼ of an inch and was unable to close it because of the extreme soreness of her mouth and teeth.

The entire oral mucous membrane, but especially that over the alveolar processes, was covered by a mass of large vesicles, which on bursting discharged a thick hemato-serous fluid. As the condition i. e. (mercurial stomatitis) progressed, small areas of necrosed bone were exposed and showed over the entire alveolar process, first appearing in the regions between the teeth themselves, and then spreading laterally in all directions. The teeth finally became so loose that during the first month twelve teeth, the lower right bicuspids and molars and the left bicuspids and first molar, and the upper right and left second bicuspid and first molar either dropped out, or were taken out by the patient herself through fear of swallowing them. The remaining teeth, although very loose at this time, subsequently tightened in their sockets and at the present time are firm and normal.

A large abscess mass formed externally on the left side beneath the bicuspids, and was opened and drained into the mouth. Coincident with the development of this condition in the mouth, there occurred an acute purulent otitis media, with an associated intense pain over the mastoid region and back up over the neck and head. The ear drum ruptured in the upper posterior quadrant and there was a free discharge of pus. There was complete loss of hearing on the left side.

By Jan. 15th the entire alveolar processes of the upper and lower jaws had necrosed and were completely denuded of gum tissue on their articulating surface.

Patient was operated on Feb. 1st and 18 sequestra were removed from the exposed alveolar process and from between the necks of the teeth which had not been lost. The three largest pieces removed measured 1¾, 1½ and ¾ inches in length. At this time the abscess mass beneath the left maxilla, having continued to increase in spite of being drained into the mouth, was opened externally upon the face and was drained daily by means of through and through irrigations and kept open by means of a rubber tube and gauze packs. With the exception of this one area, the mouth had entirely healed by Feb. 15th. This sinus continued to discharge about 1 dram of pus with each daily irrigation, being reduced to but a few drops at the end of two months, i. e. April 15th. At this time a large sequestrum was removed through the external face incision, and by May 1st the patient's mouth condition was entirely clean and healthy.

The condition in the ear was successfully treated by Dr. W. S. Franklin without operation. Discharge was entirely stopped and patient's hearing on the left side has been restored to about one-third normal.

By means of tonics and an outdoor life she has regained about 20 pounds in weight, but still suffers from extreme anemia, due to a very weak heart. She also has a chronic parenchymatous nephritis.

This case is simply an aggravated form of a condition which is seen in the mouth during the normal administration of mercury as it is given in the treatment of syphilis, or which we quite frequently see resulting from an overdose of calomel. The fact that mercury is to a very large extent excreted through the mucous membrane of the mouth probably accounts for the peculiar susceptibility of the oral tissues to overdoses of the drug. In ordinary salivation we get the beginning of a mercurial stomatitis and a mercurial necrosis of the alveolar processes which accounts for the gradual destruction of the bone around the teeth, with loosening of the teeth, and which, if allowed to continue, will ultimately result in the complete loss of the teeth owing to the complete softening of the alveolar processes supporting them. And the cementum of the teeth, which is typical bony tissue histologically, takes part in the same destructive process and hastens the tendency toward tooth exfoliation. There are a great many cases on record in which this condition has occurred, but I am unable to find any case in which

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such extensive destruction as took place in the present case has been reported.

The unique character of the present case is perhaps due to the fact that these patients usually die, and it is only by the rarest good fortune that this patient's recovery, owing to prompt medical attention and to her own remarkable vitality and resistance, has enabled us to witness and to treat the interesting condition which we are able to report in this paper.

"Lockjaw" Caused by Spasm of the Internal Pterygoid Muscle.*

By AD. B. BAER, B. L., B. S., M. D., D. D. S., Special Lecturer on the Medical and Surgical Diseases of the Mouth, Face and Jaws, University of California Dental Department.

About the middle of August, 1910, Mr. J. B., 22 years of age, was kicked on the right side of the face by a horse. Associated with extreme pain, there resulted a gradual difficulty in swallowing and progressively increasing difficulty in the movements of the lower jaw until complete locking occurred at the end of about a week. Two X-ray pictures were taken at the time and were interpreted as showing a fracture about the middle of the ramus of the maxilla on the right side. There was a complete over-bite of the upper front teeth, the lower front teeth being completely hidden behind the uppers. The bicuspids and molars were in apparent correct occlusion. It was this condition of the front teeth which first drew attention to the fact of a possible fracture, the patient claiming that previous to his injury the front teeth had been in edge to edge occlusion.

A plaster cast was applied and kept in position for six weeks. During its application patient complained of constant pain, difficulty in swallowing and intermittent desire to hawk and spit. Cast was removed at the end of six weeks, with no apparent change in patient's condition. Jaws were still locked, but there were intervals when he was able to open his mouth about one-half inch.

Another X-ray picture was taken at this time with same diagnosis, same treatment and the same result. Patient consulted several different surgeons and specialists in an effort to get relief, and after a lapse of nine months he was practically in the same condition as when he started. At the end of nine months he was given his choice of going through the rest of his life with his jaws almost locked, or of submitting to an open operation, which would necessitate the cutting of his right facial nerve with a resulting paralysis of the right side of the face, gradual loss of muscular tone and atrophy, dribbling of the saliva from the right corner of the mouth and pulling of the face over to the left side. He chose the first of the two alternatives until his nagging pain again caused him to seek relief and he was sent to me May 28th of this year.

Preliminary examination disclosed this very important fact: That his teeth were in perfect occlusion, the apparent over-bite of the upper front teeth being a perfectly normal condition. (Normal occlusion of the teeth may always be accurately determined as follows: the upper first bicuspid tooth should come down between and articulate with the two lower bicuspids; and the anterior buccal cusp of the first upper molar tooth should fall into the groove or sulcus which lies between the two buccal cusps of the first lower molar tooth.) Given this normal articulation of the teeth, we can practically always eliminate the possibility of displacement due to fracture in the anterior or posterior parts of the body of the maxilla. And a most painstaking and forcible digital examination failed to show any apparent fracture of the maxilla in this case. We were able to verify this conclusion by means of an X-ray picture taken by Dr. Painter. We were perfectly sure of our X-ray reading, but to make assurance doubly sure, inasmuch as practically every man who had seen the patient had made a diagnosis of fracture high up on the ramus, a second picture was taken, with a film placed inside the mouth and held against the internal surface of the ramus, for there is necessarily considerable overshadowing of the ramus of the jaw by the other bones of the head and especially by the first and second cervical vertebra. But by means of this film picture we were able to get the anterior half of the ramus clear to the coronoid process and were able to absolutely eliminate all possibility of a fracture. And there not only was no fracture, but there was no other pathological condition of the maxilla to account for patient's symptoms.

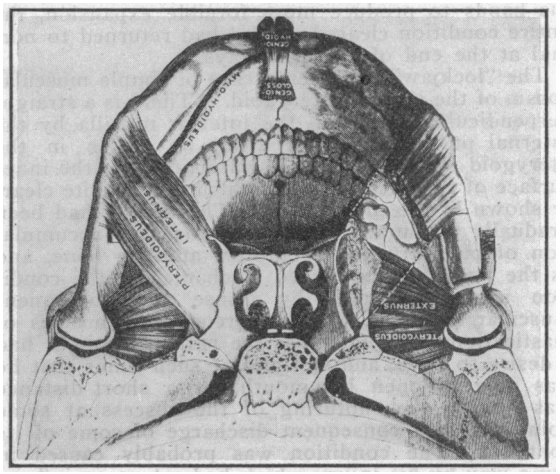

Plate showing internal pterygoid muscle, seen from behind. (After Testut.)

Having determined what was not the cause of patient's condition, we set about to determine what was the cause, if possible. We had four signs or symptoms to go by. 1st, the jaws were locked. 2nd, there was a dull, steady pain in the glenoid cavity at the point of articulation. 3rd, there were intervals when it was possible for patient to open his mouth from ½ to ¾ of an inch, and 4th, there was an intermittent desire to hawk and gag and spit. The diagnosis was finally made in the following way: By a careful digital examination, the most painful point was found to be up under the angle of the maxilla on the internal surface and not at the articulation as the patient supposed. From the angle of the jaw the pain decreased on pressure as we ascended toward the condyle. We then cocanized the throat and getting the base of the tongue well down and out of the way, an intensely red, inflamed area showed on the right side over the area of insertion of the internal pterygoid muscle, and there was a very definite inward bulging of the muscle at this point. This inward bulging was made perfectly evident by comparing the two sides. Pressure upon this area by means of a long applicator caused the patient to shriek with pain which was so intense that he lost complete control of himself. At the end of a few minutes he quieted down, and the intense pain was followed by an almost complete absence of pain. He was now able to open his mouth about ¾ of an inch and on further examination a thin stream of thick whitish gray pus was seen trickling down into the throat from the posterior inferior margin of the ramus of the jaw. Diagnosis of a slow chronic abscess in the sheath of the internal pterygoid muscle at its point of intersection into the lower end of the ramus of the maxilla, was made. The X-ray picture completely eliminated the possibility of there being any associated bone involvement and we were able to give patient and his friends a positive opinion on the question of prognosis.

Patient was sent to hospital and even under ether

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